

FIGURE 1

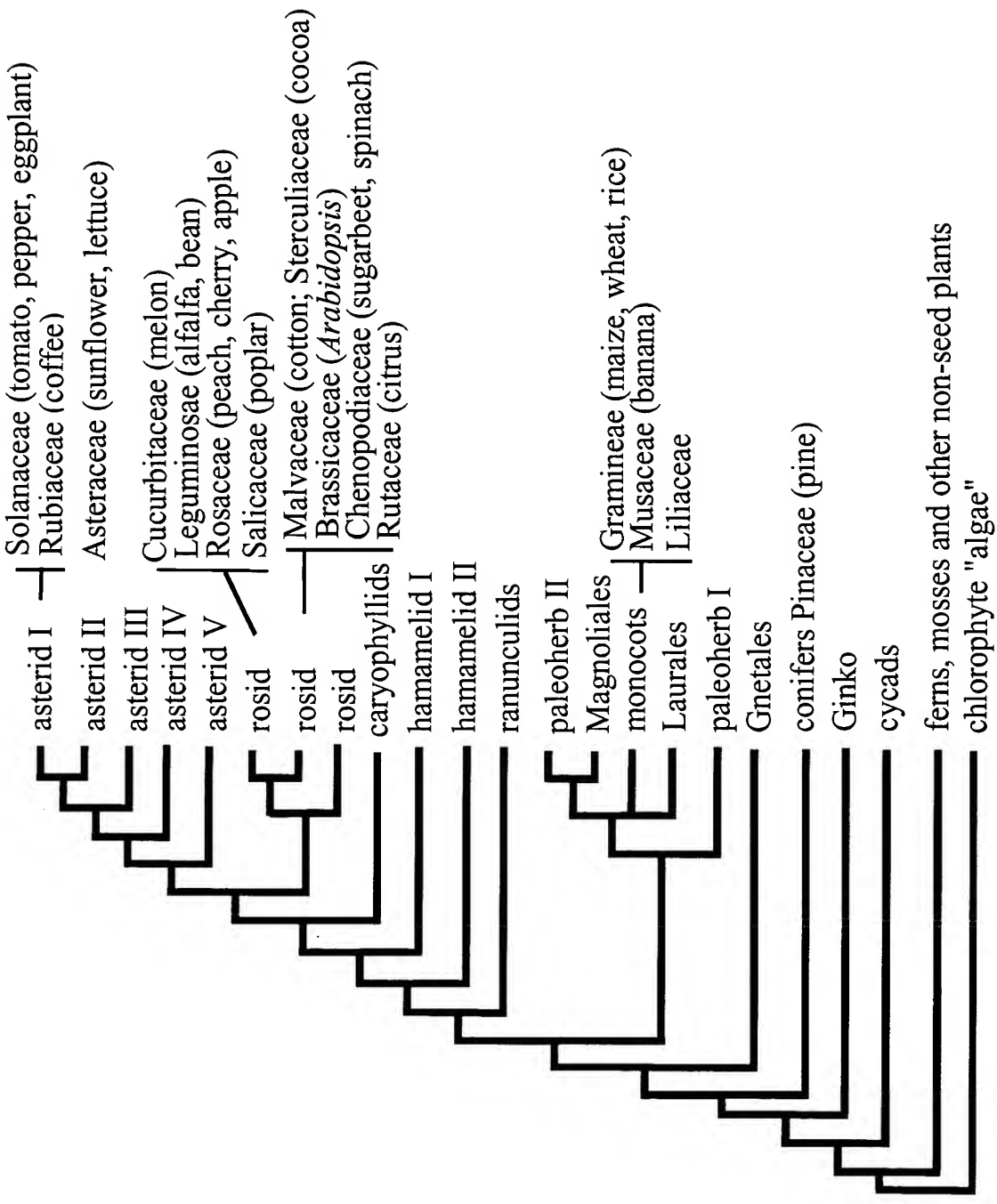


FIGURE 2

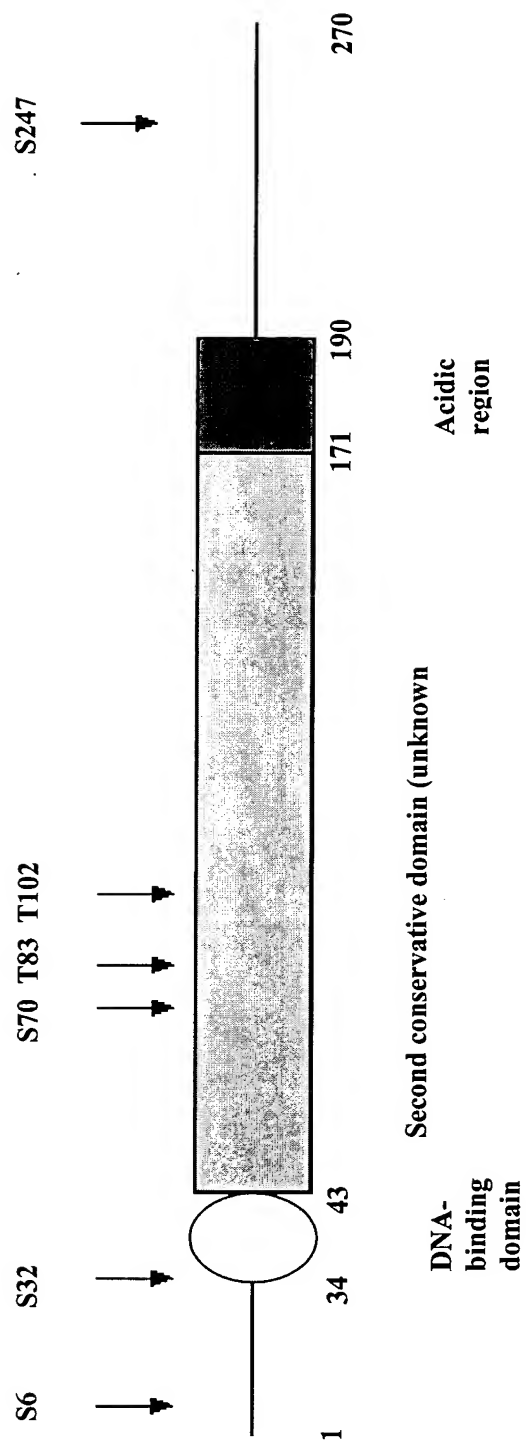


FIGURE 3

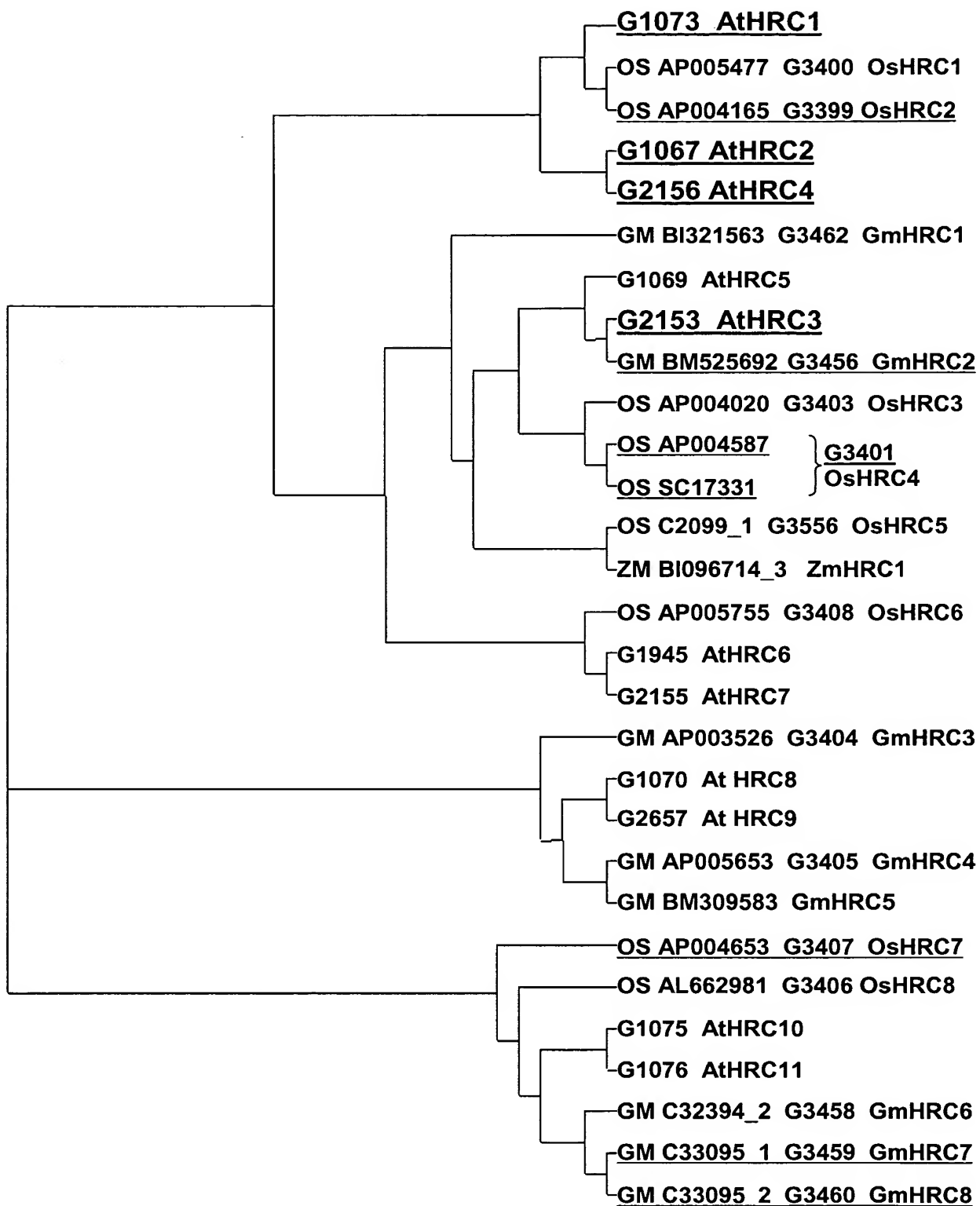


FIGURE 4

G1071	S Y Y I H R G L S G S G P P T F H G S P Q Q Q Q G L R H L P N Q N S P F G S G S T G F G S P S L H G	60	70	80	90	100
Pisum T06584	G P G S Y Y L H R G G V E A A G S G S G G F Q V P P G F R A L P N N G I I A Q P N V R A Q G G N G D					
A. majus SAP1						
G1072						
AAK00433						
G1068	N P A A A P M R L S F D Q M A G K A P G G E Q Q H H H P G P M L Y A A A P A G A A P P P Q G G N					
G1069	H L Q Q Q Q P P P G M L M S H H N S Y N R N P N A A A V L M G H N T S T S Q A M H Q R L P F G G					
G2153						
G3456						
G3401						
G3402						
G3403						
G2157						
G3556						
G1067						
G2156						
G3400						
G3399						
G1073						
G2789						
G596						
G1070						
G3405						
G3404						
G1075						
G1076						
G3460						
G3459						
G3458						
G3406						
G3407						
G1945						
G2155						
G3408						
BAB64709						
G3462						

	M A N P W W V G N V A I G G V E S P V T S S A P S L H H R N S N N					
	M E G G Y E Q G G A S R Y F H N L F R P E I H H Q Q L Q P Q G G I N L I D Q H H H					
	M D G G Y D Q S G A S R Y F H N L F R P E L H H Q L Q - P Q P Q L H P L P Q P Q P					
	M A G M D P T G G G G V A A H Y L H M L R A Q Q H - - Q P L S P A G D V K A					
	M A G M D P G G G A G A G S S R Y F H H L L R P Q Q P S P L S P L S P T S H V K M					
	E V S - - - - R S H T P Q F L S S D - H Q H Y H H Q N A - - - - G R Q K R G R E - - - -					
	Q V S - - - - R S L P P P F L S R D L H L P H H Q F Q - - - - H Q Q Q Q Q Q Q N H G H D I					
	G S Q - - - - S S L P P P F H A R D F Q L H L Q Q Q Q E F F L H H Q Q Q R N Q T D G D Q Q G					
	I H G - - - - H H L P P P F N T R D F H H L Q Q Q H Q L H L K T E D D Q G G G T P G V F G -					
	A A H G G G H H H H F G A P P V A A F H H H P F H G G G A H Y P A A F Q Q F Q E E Q Q L V A					
	M A G L D L G - T T S R Y V N H V D G G - G G G Q F T T D N H H E D D G - - - -					
	M A G L D L G - T A F R Y V N H Q L H R - P D L H L H N S S S D D V T P - - - -					
	M A G L D L G - S A S R F V Q N - L H L - P D L H L Q Q N Y Q Q P R - - - -					
	M A G L D L G - S A S R F V Q N - L H R - P D L H L Q Q N F Q Q H Q D Q - - - -					
	M A G I D L G - S A S H F V H H R L E R - P D L E D D E N Q Q D Q D N N - - - -					
	M A G L D L G T A A T R Y V H Q L H H L H P D L Q L Q H S Y A K Q H E P - - - -					
	M A G L D L G - - - - T S Y L H H H Q S L H L R H D D G G A G - - - -					
						M K
	M S F C E R D M N K E S M Y Q E R D D M A G I R F A T P P L P Q Q Q Q - - - -					

FIGURE 5B

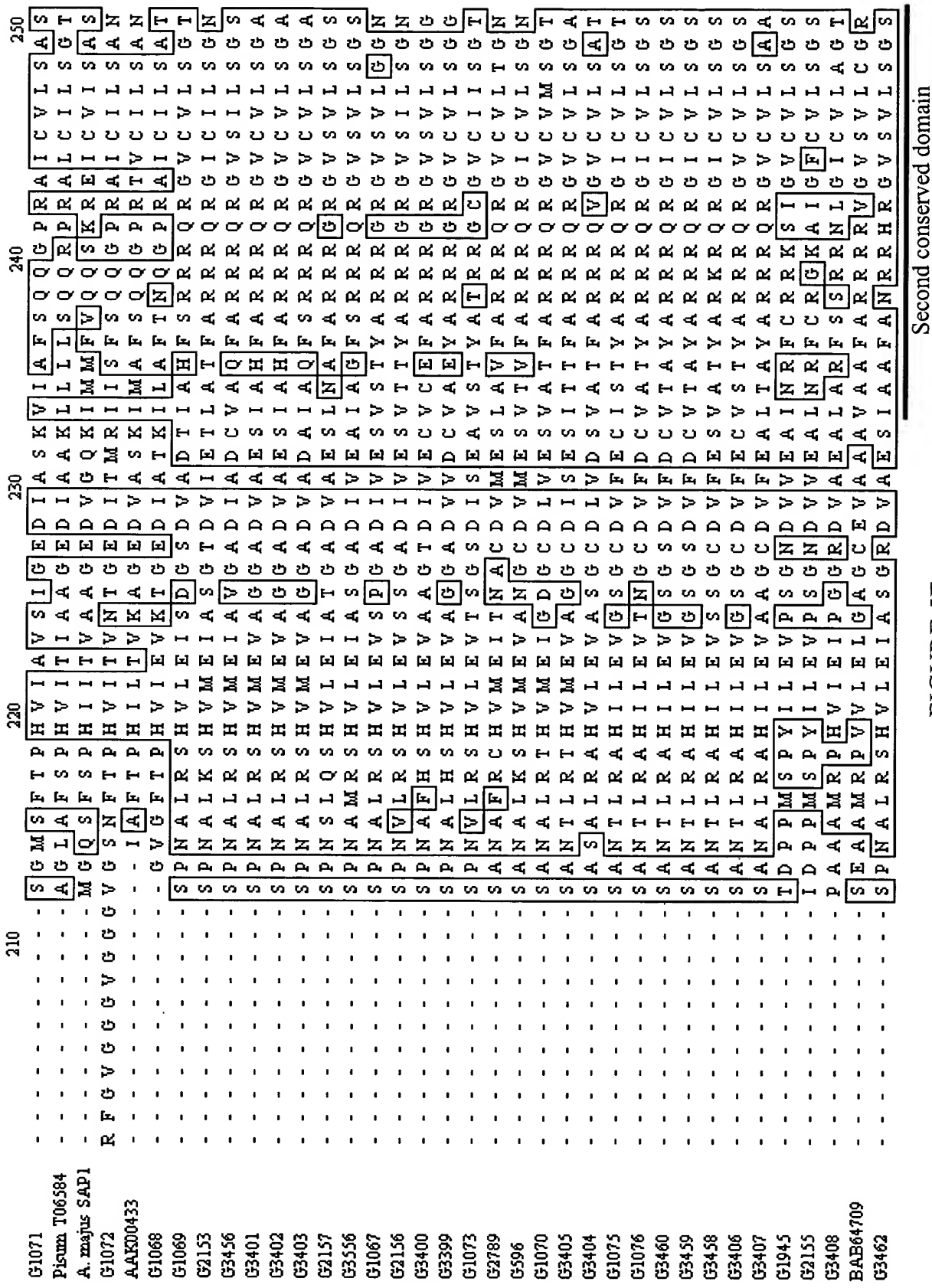
G1071	110	120	130	140	150
Pisum T06584	D P S L A T A A G G A G A L P H H I G V N M I A P P P P S E T P M K R K R G R P R K Y G Q D G S V				
A. majus SAP1	T S S M F S L E P Q S H A D F N H D I S V G A S S G A P S S E P V K K K R G R P R K Y G P D G S V S				
G1072	- - - - - P A N Q F M G L S L P M E A P M P S S G E A S G K K R G R P R K - - - - - K Y G T P				
AAK00433	V M G M G E L M R K K R G R P R K Y A P D Q Q I D Q K T L E S L G F P T S P L P S A S N S Y G G G N E G G				
G1068	S M S P H Q P Q Q H Q V H H P Q P Q Q S L L T K G D L G I A M N Q S Q D N L S G D - - - - - E D D P R				
G1069	- - - S V S S G H H Q N H H H H Q E V D N N N - - - - - D D D R D N L S G D - - - - - D H E P R				
G2153	S M N M A M D S G H N N H H H H Q E V D N N N I G - - - - - E E D E D R E N S D - - - - - E P R				
G3456	- - - M K K - P D L G F S M N E S T V T G N H I G - - - - - D H D H E M N G T S A G - - - - - G E P K				
G3401		M A S K E P S G - - - - - D H D H E M N G T S A G - - - - - G E P K			
G3402		M A S K E P S G D H - - - - - D H D H E M N G T S A G - - - - - G E P K			
G3403	- - S S G P K A E L P V A K E P E A S P T G G A - - - - - A A D H A D E N N E S G - - - - - G E P R				
G2157	N P P T M T R S D P R L D H D F T T N N S G S P N T Q T Q S Q E E Q N S R D E - - - - - Q P A V E				
G3556	M G S I D G H S L Q Q H Q G Y S H G G G A G S N E E E A S P P - - - - - G G G S A				
G1067	Q H Q Q H Q Q Q P S D D S R - - - - - E S D H S N K D H H Q Q G - - - - - R P D S D				
G2156	Q P Q P Q Q N - - - S D D - - - - - E S D S - N K D - - - - - P G S D				
G3400	E R S M L S P D E S P G A D A D - - - - - L G S D H - P T S S A M V A - - - - - A E D - S				
G3399	E H S K M S P D K S P V G E G D H A G S G S G V G G D H Q P S S S A M V P - - - - - V E G G S				
G1073	M E L N R S E A D E A K - - - - - E E G V E P N - - - - - A E T T P T G G A T S S - - - - - A T A -				
G2789	- - - - - - - - - - - E E G V E P N - - - - - N I G E D L A T F P S G - - - - - E E - -				
G596	D Q H R I G L K R D R - - - - - D A D I D P N E H S S A G K D Q S T P G S G - - - - - G E S G G				
G1070	G S G N R Q I K M D R E E T S D N I D N I A N N S G S E G K D I D I H G G S - - - - - G E G G G				
G3405	- - - S R G T K R D H D D - - - - - D E N S G N G H G S G G D G G D L A L V P P S - - - - - G G G P D				
G3404	A A A G G M A K Q E L V D E S N N T I N S G S G S G G E E Q R Q Q S G - - - - - E E Q H Q				
G1075	- - - - - G A G G N H H H - - - - - H H N H N N N H Q G L D L I A S N D N - S G - - - - - L G G G G				
G1076	- - - - - G A G M G H F T V D D E D N N N N H Q G L D L A S G G S G S - - - - - G G G G G				
G3460	- - - - - H K R D S E E Q E T P P N P G T A L A P F D N D - D D K S - - - - - Q G L E L				
G3459	- - - - - Q H Q R D L E E Q K T P P N - H R M G A P F D D S D D R S - - - - - P G L E L				
G3458	- - - - - L N N H E G L D L V T P N S - - - - - - - - - - - - - - - G -				
G3406	- - - - - S D D P N G S G G G N S N G P Y G D H D G S S S S G P - - - - - A T D G A				
G3407	- - - - - S D D G G H D D L S P G S - - - - - - - - - - - G G G G P S S - - - - - T A G G A				
G1945	G E Y R E Q K S N E M F S K L P H H Q Q Q Q Q Q Q Q Q Q H S L T S H F H L S S - - - - - T V T P T				
G2155	M L S K L P T Q R - - - - - - - - - - - - - - - H L H L S P - - - - - S S P - -				
G3408	- - - - - Q Q L V E C F S D E V D S R G S G G E - - - - - M K D A V G S G S G Q L V - - - - - V V G G G				
BAB64709			M A D E G S S R A E L I - - - - - E A S P A		
G3462	T R S N S N T N A N T N T N T T E E V S R D N G E D Q N Q N L G S - - - - - H E G S E				

FIGURE 5C

G1071	160	170	180	190	200																															
Pisum T06584	S L A L S S S V S T I T P N N - - - S N K R R - - - G R G R P P G S G K K - - - Q R M A S V G E L M P S S	L K L T P M S A P A N S T Q D S G T P S E K R - - - G R G R P P G S G R K - - - Q Q L A A L G D W M T S S	E Q A A A K R L S - - - A P K K R - - - V R G K L N G F D M K - - - K M H K T I G F H S S G E	P L P - S S V P L - - - V K K R - - - P N A K - - - R R G R P P G S G K K - - - K Q F E A L G S W G - - -	G F S I S P A S D - - - P P A K R - - - N R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G G G D S A G A N A N S S D - - - P P A K R - - - N R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	E - - - G A V E V - - - N R R - - - T R R - - - T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	E - - - G A V E A P - - - T R R - - - T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	E - - - G A I D V A - - - T R R - - - T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	D - - - G A V V T G - - - R N R R - - - R N R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	D - - - G A V V T G - - - R N R R - - - R N R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	E - - - G A V V A A - - - P N R R - - - P N R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	P - - - G S G S G - - - T G R R - - - T G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	T - - - G S - - - A G R R - - - A G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	P N - - - T S S S A - - - P G K R - - - P G K R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	P - - - V T S G S - - - T G K R - - - T G K R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - G S G S G - - - P M R R - - - P M R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G S A G S G S G - - - P T R R - - - P T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	S - - - G S S G - - - R R - - - R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	- - - - - N I - - - K K R R - - - K K R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - G G D N H - - - I T R R - - - I T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - S G D H Q - - - M T R R - - - M T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - A G S - E S - - A T R R - - - A T R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	Q - - - G A A P V - - - V I R R - - - V I R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - G S G D L - - - V M R R - - - V M R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	H - - - G G G D V - - - V G R R - - - V G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	A - - - S G P G D I - - - V G R R - - - V G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	T - - - S G P G D I - - - V G R R - - - V G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	- - - - P G D V - - - V G R R - - - V G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	V - - - G P G D V - - - V A R R - - - V A R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	G - - - I G G E V - - - V A R R - - - V A R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	V - - - D S S I E - - - V V R R - - - V V R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	- - - - S M E - - - T V G R - - - T V G R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	D - - - G A S I E - - - V A K K - - - V A K K - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	P - - - A L D L P S - - - P P R K - - - P P R K - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -	P - - - G S - - - S G R R - - - S G R R - - - P R G R P P G S G K K - - - P K A P I F V T R D - - -
A. majus SAP1																																				
G1072																																				
AAK00433																																				
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G2156																																				
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G3399																																				
G1073																																				
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G2155																																				
G3408																																				
BAB64709																																				
G3462																																				

AT-hook domain

FIGURE 5D



G1071	K I K S K K R E E E	360	A S E V V Q E T D	370	D H H V L D N N N	380	400
Pisum T06584	S K V K T K Q G	-	- M I T N G E S	-	- S E P H N D N L G	-	- S P A S A
A. majus SAP1	K D A N V E A A S	-	- G K S P S P N G G	-	- A S A P G L S F R S P A D S G I Q M	-	- S G I Q M
G1072	Q D H Q K P R K Q R	-	- V E H A P A A V M S	-	- V P P P P S P P P A A S V F S P T	-	- S G S
AAK00433	K S K P V E T R K V E P	-	- M S A P P Q M A T Y V P A P V A S P S E G T S	-	- G P P S E G T S	-	- S G S
G1068	Q K Q S A G R A Q N	-	- T P E P A S A P A N M L S F G G V G P G S P R S Q G Q H S S E	-	- G P G S P R S Q G Q H S S E	-	- R I G S N L
G1069	E R L P M E E E	-	- E - D G G G S R	-	- Q I H G G G D S P P	-	- S S G A G G
G2153	E R L P L E E E A A	-	- E R G G G G S G G V V P G Q L G G G - S P L	-	- G G G S P - Q E	-	- K N G G P G
G3456	E R L P L E D	-	- D Q E Q H G G G	-	- G G G S P - Q E	-	- L M A G -
G3401	E R L P L D Q E	-	- E E E A A A G	-	- G M M A P P P	-	- L M A G -
G3402	E R L P L D Q E	-	- Q E E A A A G	-	- G M M A P P P	-	- L M A G -
G3403	E R L P L E E E	-	- E E G S G P P	-	- M P G G A E P	-	- L M A G H
G2157	E R L P I E E E Q	-	- Q E Q P L Q L E D	-	- G K K Q K E E N D D	-	- N E S G N N
G3556	E R L P L D Q E G	-	- E G A V L S G S E	-	- G A A Q M E Q Q	-	- S S
G1067	E R L P I E - E E E	-	- E E G G G G G	-	- G G G - G G P P Q M Q	-	- Q A P S A S P P
G2156	E R L P L E - D E G	-	- G E G G E G G	-	- G G G G G G G	-	- P A T S S S P P
G3400	E R L P L D G E D P E	-	- A E A A A A T P P G D A A Q P T G P P P Q Q Q P P Q Q Q P A A S Q S S E V	-	- G G G G G G G	-	- P A T S S S P P
G3399	E R L P L E G E E E	-	- V A A P A A G E A Q D Q Q V A Q S A G P P G Q Q P A A S Q S S G V	-	- G G G G G G G	-	- P A T S S S P P
G1073	D R L P I E - E E E	-	- T P P P R T T G V Q Q Q P E A S Q S S E V T G S G A Q A C E S	-	- G G G G G G G	-	- P A T S S S P P
G2789	E R L P L E E E E	-	- T E R E I D G N A	-	- A R A I G T Q T Q	-	- K
G596	E R L P L E E D Q E E Q T A G A V A N N I D G N A	-	- M Q T P V H G G G	-	- T M G G G T Q T Q T Q T Q Q Q Q Q Q	-	- K
G1070	E R L P L E E D E	-	- L L A A Q G Q A	-	- G G G S L E S P P	-	- M M G Q Q L
G3405	E R L P L E D E	-	- P P Q H M A	-	- D S A G L L A A G	-	- Q Q A A Q L
G3404	E R L P L E D E	-	- L Q S G G G G	-	- G G Q S S P P P	-	- P P L P
G1075	E R L P L D E H E E H	-	- L Q S G G G G	-	- G G G N M Y S E	-	- A T
G1076	E R L P L E E D E Q Q	-	- Q Q L G G G S N	-	- G G G N L F P E	-	- V A
G3460	E R L P L E E D E Q Q	-	- H Q Q L Q I Q S P A T S	-	- S Q G N N N N N	-	- P F
G3459	E R L P L E E D E Q Q Q Q Q Q L Q I Q P P A T S	-	- Q Q Q Q Q L Q I Q P P A T S	-	- S Q G N N N N N	-	- P F
G3458	E R L P L D E D E S M Q M Q Q G Q S S A G D G S G D	-	- Q Q Q Q Q L Q I Q P P A T S	-	- H G G V S N N	-	- S F
G3406	E R L P L E E E A P P P Q A G L Q M Q Q P G G G A	-	- Q Q Q Q Q L Q I Q P P A T S	-	- D A G G M G G A F	-	- P P
G3407	E R L P L E D G D E V V P P A P A G S D Q G G G G S	-	- Q Q Q Q Q L Q I Q P P A T S	-	- G M P P L G V D	-	- P S
G1945	H R L P A E E E Q K	-	- H S A G T G E E R	-	- E G Q S P P P V S G G G E E S G Q M	-	- P S
G2155	H R L P A T E E E Q	-	- R N S A E G E E	-	- E G Q S P P P V S G G G	-	- P S
G3408	H R L P A D D A S V S	-	- V S V S L S G S G	-	- D A D E H R G H Q H K P E	-	- P Q E P R
BAB64709	H R L P A D E D E	-	- A T G S R G G E E	-	- R R H P Q Q Q Q Q Q Q Q	-	- T V A A T S A V D
G3462	E R L P L E D D Q G E	-	- E E M Q V Q Q Q Q	-	- Q Q Q Q Q Q Q Q	-	- Q Q Q Q S Q

FIGURE 5H

450

440

430

420

410

G1071

Pisum T06384

A. majus SAP1

G1072

AAK00433

G1068

G1069

G2153

G3456

G3401

G3402

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G2157

G3556

G1067

G2156

G3400

G3399

G1073

G2789

G596

G1070

G3405

G3404

G1075

G1076

G3460

G3459

G3458

G3406

G3407

G1945

G2155

G3408

BAE64709

G3462

I S P V P - - - Q Q P N Q N L I W S T G S R Q - - - M D M R H A H A D I D L M R G
 P P D Q N - - - Y I S S P T G S Q P S D - - - M K S A P A H T G I D L T R G
 G G G N P F L I Q N R T M H M T P M E W I G S A D H G - - - M H Q S P E N G D Y D H I P D
 N P D R E - - - Q P P S S F G I S S W T N G Q D M P - - - R N S A T D I N I S L P V D
 S D D S G - - - S P I N H S G M P Y N H S G Q Q Q H Q Q H Q Q H Q Q H Q Q I F G N S T P Q P L H Q I P M Q M Y Q N L W P
 S S E E N - - - E S N S P L H R R S N N N S N N S N H L I P N G - - - A G Q L - G H E P Y T W V H A - - -
 P D L S G - - - M A G P G Y N M P P G N L V S N G G S G - - - G G Q M S G Q E A Y G W A Q A - - -
 G D G N - - - Q G L P V Y N M P G N L V S N G G S G - - - G G Q M S G Q E A Y G W A Q A - - -
 E A S S - - - I S V Y N N N V P P S L G L P N G Q H - - - L N H E A Y S S P W G H S P H A - - -
 - A A D P - - - L L F - - - G G G M H D A G L - - - - A W H H A R P P P - - -
 - A A D P - - - L L F - - - S G G M H D A G L - - - - A W H H A R P P P - - -
 G I A D P - - - S A L P M F N L P P S N G L G G G D - - - - G F P W A A H P R P - - -
 G N E G S - - - M Q P P M Y N M P P N F I P N G H - - - - Q M A Q H D V Y W G G P P P - - -
 G - G A V - - - V P P P M Y A A V Q T P P H D M - - - - F G Q W G H A A V A R P P - - -
 S G V T G - - - - Q G Q L G G N V G G Y G - - - - F S G D P H L L G W G A G T P S R P P - - -
 S G A G - - - - Q G Q L R G N M S G Y D Q - - - - F A G D P H L L G W G A A A A A P P R
 T A G D G - G G G G L G M Y - L G G H V G S Y Q Q Q Q Q Q Q Q Q Q L P G P G D N F G S W S G S I R P - - -
 T G G D G T G G A G G M S L Y N L A G N V G G Y - - - - Q L P - - G D N F G G W S G A G A G G - - -
 N L Q G G - N G G G G V A F Y N L G M N M N N F - - - - Q F S G - G D I Y G M S G S G S G G G G
 Q L M Q D - - - A T S F I G - S P S N L I N S V S L - - - - P - - - G E A Y W G T Q - - -
 Q L M Q D - - - P T S F I Q G L P P N L M N S V Q L - - - - P - - - A E A Y W G T P - - -
 Q H Q Q Q - - - A M S G H Q G L P P N L L G S V Q L - - - - Q Q H D Q S Y W S T G - - -
 A G G A V - - - D P S L F Q G L P P N L L G N V Q L - - - - P P E A A Y G W N P G A G G - G -
 L P P H Q - - - Q P I L Q D H L P H N L M N G I H L - - - - P G D A A Y G W T S G G G - G G -
 G G G G - - - L P F F N L P M S M P - - - - Q I G V E S W Q G N H A G - A G -
 A G G G - - - G - L P F F N L P M N M Q P N - - - - V Q L P V E G W P G N S G - - -
 P D P S - - - G - L P F F N L P L N M Q N - - - - V Q L P P P F
 P D P S - - - G - L P F F N L P L N M Q N - - - - V Q L P V E G W A V N P A - - - S -
 P D P S - - - G - L P F F N L P L N M P - - - - Q L P V D G W A G N S G - - - G -
 D P S A - - - G - L P F F N L P L N M P P G G G - - - - S Q L P P G A D G H G W A G - - - A -
 G G A T - - - G G L P F F N M P F G M P P - - - - M P V D G H A G W P G A G V G - - -
 A G S G - - - E S C G V S M Y S C H M G G S - - - - - D V I W A P T A R A P - - -
 G - - - E S - - - M Y V G G S - - - - - D V I W D P N A K A P - - -
 Q L R R P P P H L S A A A V S A A Q P V E P C G A P M Y A C H P Q Q E V M W P P P A R T P H P P
 V G L L G V G G V A G G A S G G Q V G R H Q Q Q - - - - Q Q A E M V L W A Q S P G S - - - V G
 G L G E Q - - - - V S M P M Y N L P P N L L H N G - - - - Q N M P H D V F W G A P P - - -

FIGURE S1

FIGURE 5J

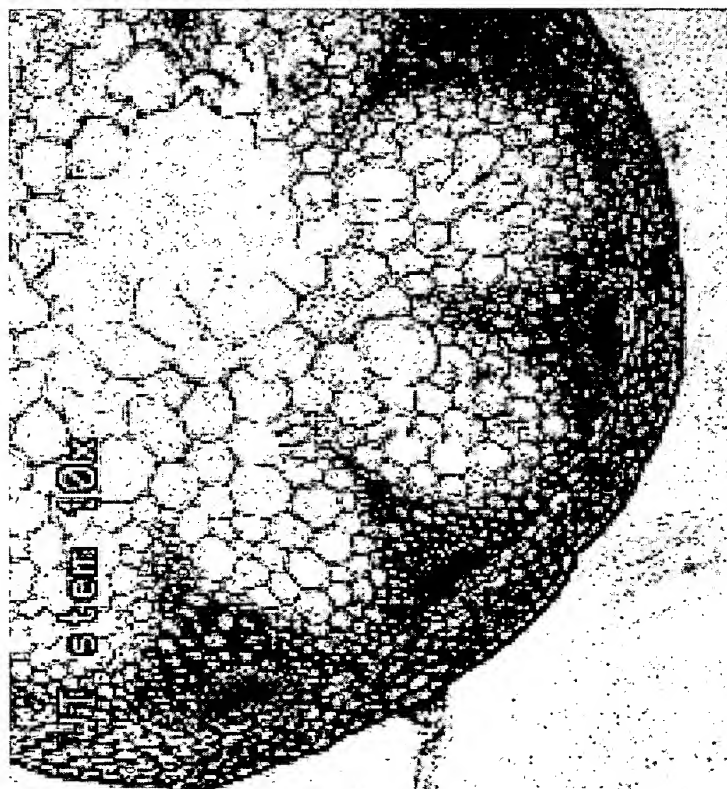


FIGURE 6A

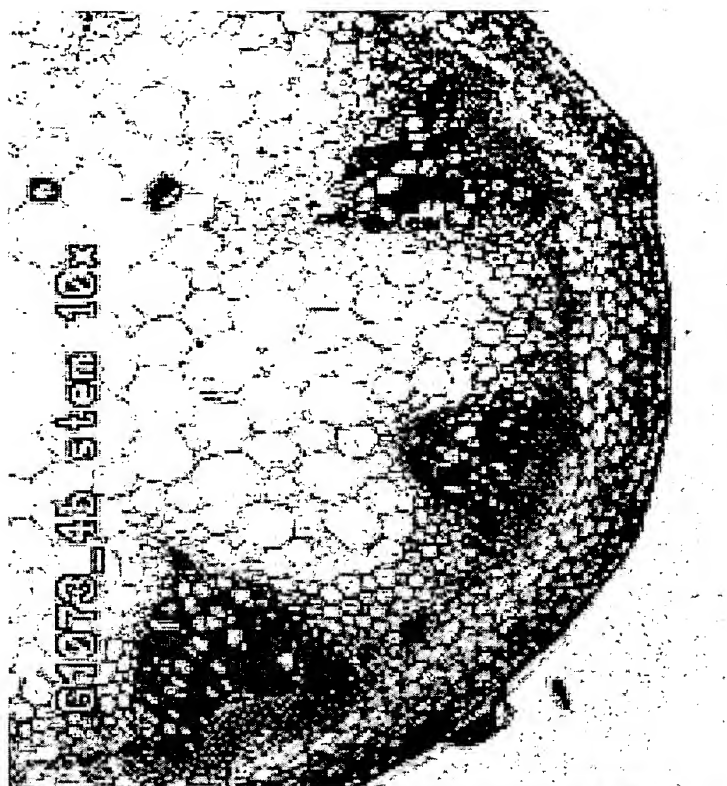


FIGURE 6B

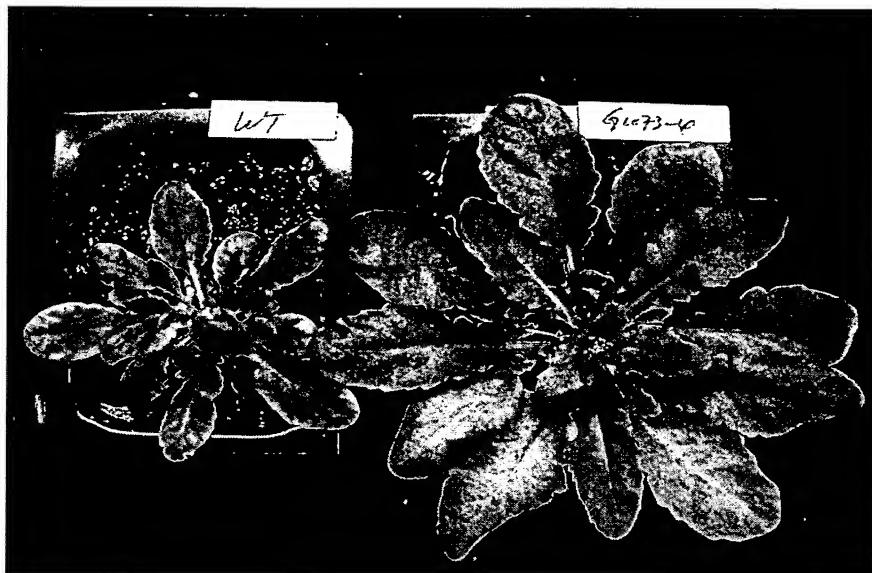


FIGURE 7A

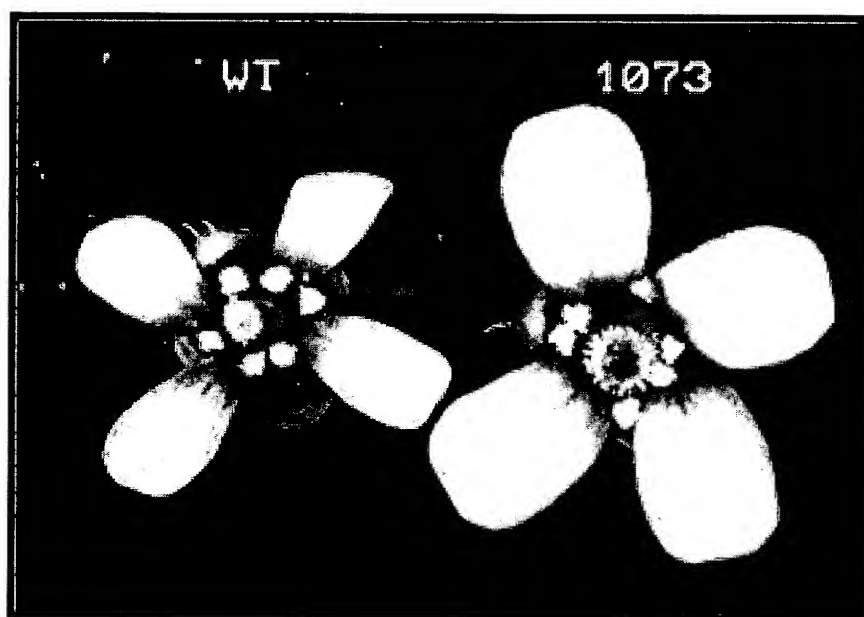


FIGURE 7B



FIGURE 8A



FIGURE 8B

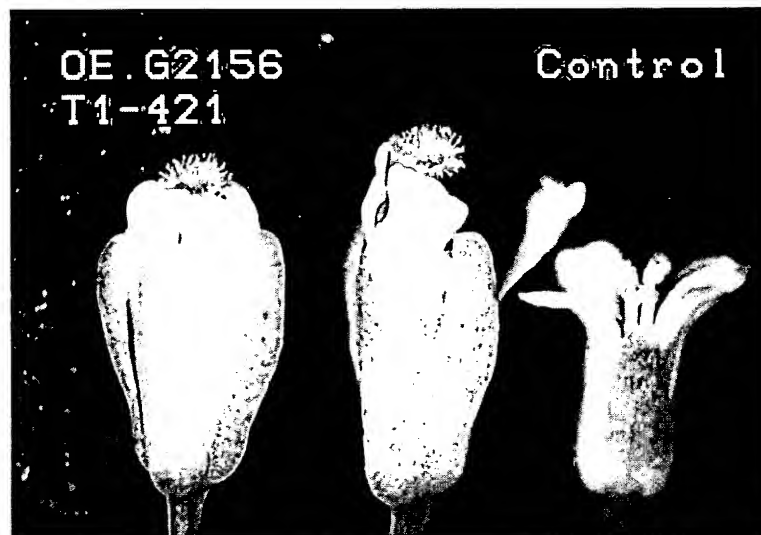


FIGURE 9A



FIGURE 9B

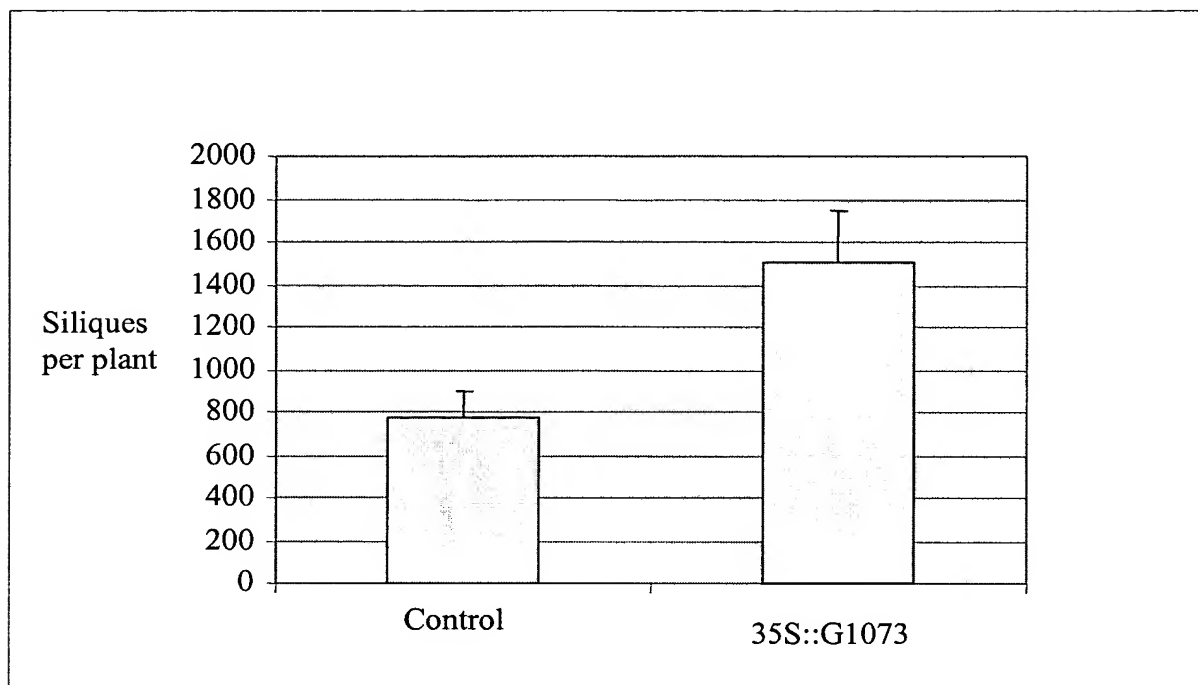


FIGURE 10



FIGURE 11A

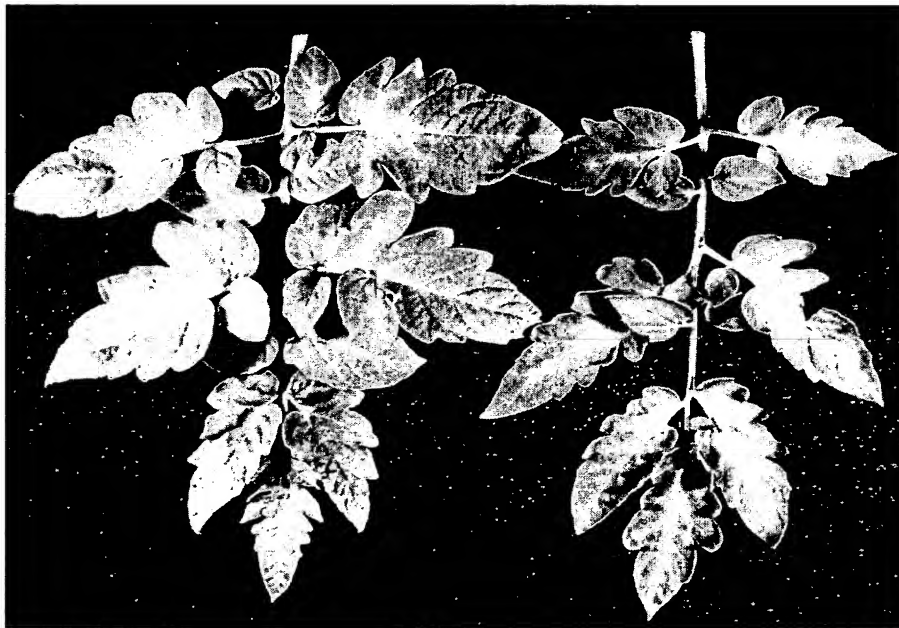


FIGURE 11B



FIGURE 12A

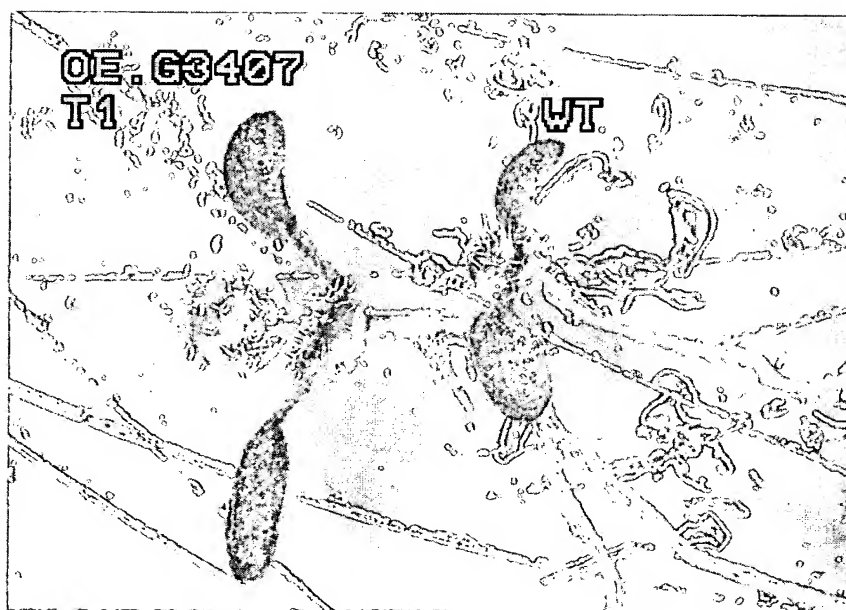


FIGURE 12B



FIGURE 13